

## ABSTRACT OF THE DISCLOSURE

A signal processing device uses a  $\Delta\Sigma$  modulator having varying effective orders to ensure an S/N ratio by selecting a high order when a 1-bit music signal is output via the  $\Delta\Sigma$  modulator. The signal processing device prevents a noise during switchover by shifting to a low order just before the  $\Delta\Sigma$  modulator is bypassed if this occurs. The present invention provides a digital signal processing device which can switch between an original sound signal and a  $\Delta\Sigma$  modulation signal, and yield a sufficient S/N ratio for a reprocessed  $\Delta\Sigma$  modulation signal. If any 1-bit original sound signal is input, little switching noise is generated.

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